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**(54) PLANT OPERATION ABNORMALITY PREVENTION SYSTEM**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To prevent abnormality generation by predicting abnormality by finding a total evaluated value based on fuzzy integration while using a fuzzy measure identified by fuzzy proposition suitability and sequential identification method, and regulating the state quantity of a plant according to the predicted result.

**SOLUTION:** A fuzzy proposition storage part 3 stores plural fuzzy propositions for which the conditions made into a language at the time of abnormality generation are expressed by membership functions defining detected values at the plural sections of the plant as evaluation items. A fuzzy proposition suitability calculation part 2 calculates the suitability of respective fuzzy propositions by applying the detected values to these

fuzzy propositions. A fuzzy measure identification part 6 identifies the fuzzy measure by using the sequential identification method. An abnormality predictive part 4 performs the abnormality prediction of plant operations corresponding to this suitability and the fuzzy integration using the fuzzy measure. Then, a state quantity regulation part 7 regulates the quantity of states more than one of the plant according to the provided predicted result.

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